fabrication of dental restoration (E. Dianne Rekow and Bruce Nappi). Minimal-access surgery. 42. A surgeon's perspective on the difficulties of laparoscopic surgery (Michael R. Treat). 43. Requirements and possibilities of computer-assisted endoscopic surgery (E. Schippers and V. Schumpelick). 44. Perception and manipulation problems in endoscopic surgery (Frank Tendick, Russell W. Jennings, Gregory Tharp, and Lawrence Stark). 45. Robotically assisted laparoscopic surgery: From concept to development (Jonathan M. Sackier and Yulun Wang). 46. A telerobotic assistant for laparoscopic surgery (Russell H. Taylor, Janez Funda, Ben Eldridge, David LaRose, Steve Gomory, Kreg Gruben, Mark Talamini, Louis Kavoussi, and James Anderson). 47. A clinically applied robot for prostatectomies (Brian L. Davies, Roger D. Hibberd, Anthony G. Timoney, and John E.A. Wickham). 48. A voice-actuated, tendon-controlled device for endoscopy (Robert H. Sturges, Jr., and Schitt Laowattana). Ear, nose, and throat surgery. 49. Indications and requirements for computer-assisted surgery for the middle cranial fossa and the temporal bone (Claus Peter Christ, C. Toni Haid, Stephan R. Wolf, and Ludger Klimek). 50. Indications and requirements for computer-integrated paranasal sinus surgery (Josef Kainz, Ludger Klimek, Heinz Stammberger, and Ralph Mösges). 51. Long-term experience with different types of localization systems in skull-base surgery (Ludger Klimek, Ralph Mösges, and Georg Schlöndorff). Craniofacial surgery. 52. Applications of simulation, morphometrics, and robotics in craniofacial surgery (Court B. Cutting, Fred L. Bookstein, and Russell H. Taylor). 53. Simulation of surgical procedures in the craniofacial region (Ludger Klimek, Hans-Martin Klein, and Ralph Mösges). 54. Craniofacial surgical planning and evaluation with computers (Michael W. Vannier, Jeffrey L. Marsh, and Alexander Tsiaras). Radiotherapy. 55. Requirements in computer-asisted radiotherapy (Wolfgang Schlegel). 56. Motion planning in stereotaxic radiosurgery (Achim Schweikard, John R. Adler, and Jean-Claude Latombe). 57. Conformal external radiotherapy: Preliminary results in the treatment of prostatic carcinoma (Jocelyne Troccaz, Yann Menguy, Michel Bolla, Philippe Cinquin, Patrick Vassal, Noureddine Laieb, Laurent Desbat, Andree Dussere, and Sylvie Dal Soglio). The high-tech operating room. 58. The vision of image-guided computerized surgery: The high-tech operating room (Ferenc A. Jolesz, Ron Kikinis, and Faina Shtern). Contributors. Index.

Holes and Other Superficialities. By Roberto Casati and Achille C. Varzi. MIT Press, Cambridge, MA. (1994). 256 pages. $15.00.

Contents:

Acknowledgments. 1. Introduction. 2. Superficial particulars. 3. Immaterial bodies. 4. Hollows, tunnels, cavities, and more. 5. Fillers and skins. 6. The natural history of discontinuities. 7. Parts and holes. 8. Causality, shapes, and solidity. 9. Sameness and non-substance. 10. Ways of holemaking. 11. Hole detection. 12. The field of emptiness. Appendix: Outline of a theory. Puzzles and exercises. Further reading. Index.

Science at the Bar: Law, Science, and Technology in America. By Sheila Jasanoff. Harvard University Press, Cambridge, MA. (1995). 285 pages. $29.95.

Contents:

Foreword by Richard C. Leone. Preface. 1. The intersections of science and law. 2. Changing knowledge, changing rules. 3. The law's construction of expertise. 4. The technical discourse of government. 5. Law in the republic of science. 6. Toxic torts and the politics of causation. 7. Legal encounters with genetic engineering. 8. Family affairs. 9. Definitions of life and death. 10. Toward a more reflective alliance. Notes. Index.

Enabling Technologies for Petaflops Computing. By Thomas Sterling, Paul Messina, and Paul H. Smith. MIT Press, Cambridge, MA. (1995). 178 pages. $26.95.

Contents:

Preface. 1. Introduction. 2. Petaflops from two perspectives. 3. Summary of working group reports. 4. Applications working group. 5. Device technology working group: Semiconductor, optical, and superconductive devices. 6. Architecture working group: Architecture and systems. 7. Software technology working group: System software and tools. 8. Major findings. 9. Issues and implications. 10. Recommendations and conclusions. Appendix A. Attendee list. Bibliography.

Numerical Methods Using MATLAB. By John Penny and George Lindfield. Ellis Horwood, New York. (1995). 328 pages. $35.00.

Contents:

Preface. 1. An introduction to MATLAB. 2. Linear equations and eigensystems. 3. Roots of equations. 4. Differentiation and integration. 5. Differential equations. 6. Boundary value problems. 7. Fitting functions to data. 8. Optimisation methods. Appendix 1. Matrix algebra. Appendix 2. List of MATLAB functions. References. Solutions to problems. Index.

Real Computing Made Real: Preventing Errors in Scientific and Engineering Calculations. By Forman S. Acton. Princeton University Press, Princeton, NJ. (1996). 259 pages. $29.95.

Contents:

Acknowledgments. An exhortation. 0. Tools of the trade. Gloomy musings. 1. Nonlinear equations. 2. Preserving significant digits. 3. Quadratures. 4. Recurrence relations. 5. Choosing and tuning an algorithm. Answers to most of the exercises. Index.